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短期共同研究

流体力学における Rich Pelz の貢献

京都大学数理解析研究所

2003 年 5 月

# Preface

This is a Kokyuroku Proceedings for the RIMS meeting

## Rich Pelz' Contributions to Fluid Dynamics

which was held on January 24, 2003.

Professor Richard Bruce Pelz, or Rich as commonly known to us, was a professor at Rutgers University and stayed in Kyoto from May 19 through August 19, 2002 as a visiting professor at Research Institute for Mathematical Sciences, Kyoto University.

Rich was one of the opinion leaders in fluid dynamics; he specialized in theory and computation of vortex dynamics, particularly vortex reconnection and blow-up problems in fluid equations. His recent works on the blow-up of Euler flows using a symmetrized vortex are landmark achievements in the field.

During his stay he actively performed investigations with myself regarding some blow-up problems in fluid dynamics. On top of that he was quite outgoing academically. He liked interacting with other researchers fruitfully, and in particular he spared no effort to assist younger people. Also, he traveled to Hokkaido and Kyushu Universities to give successful seminars.

Therefore I had no adequate words to express my deep sorrow when I heard the news of his untimely death on September 24, 2002. This meant his world of science ceased developing all of a sudden, and his papers of such high quality would never appear.

The present volume includes the presentations delivered by his friends, old and new, followed by his personal record such as his publication list. Hopefully, this volume, which was compiled in memory of his scientific activity, will also help you eternally appreciate his personality. Finally it is my pleasure to thank RIMS, Kyoto University, for providing us with an opportunity to hold the meeting.

May 16, 2003  
Koji Ohkitani

# 流体力学における Rich Pelz の貢献

短期共同研究集会 (特別計画)

京都大学数理解析研究所の共同研究事業の一つとして、下記のように研究集会を催しますので、ご案内申し上げます。(2002.12.16 版)

研究代表者 大木谷 耕司 (京大・数理研)

提案者 岡本 久 (京大・数理研)

## 記

日 時： 2003 年 1 月 24 日 (金) 10:50~15:30

場 所： 京都大学数理解析研究所 202 号室

京都市左京区北白川追分町

市バス 農学部前 または北白川 下車

## プログラム

1 月 24 日 (月)

- |             |                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| 10:50~11:15 | 松本 剛 (京大・理)<br>2 次元オイラー方程式の複素特異性                                                                                                |
| 11:15~11:40 | Rich Pelz(Rutgers), 木村 芳文 (名大・多元数理)<br>Self-similar, finite-time collapse of the straight vortex-filament do-decapole           |
| 13:10~13:35 | 福本 康秀 (九大・数理), Stjepan Lugomer(Ruder Bovskovic Ins.)<br>Instability of vortex filaments and stabilization effect of finite core |
| 13:35~14:00 | 木田 重雄 (核融合研)<br>Richard の思い出                                                                                                    |
| 14:00~14:25 | 坂上 貴之 (名大・多元数理)<br>3 次元 NS 方程式のモデルとしての C L M 方程式について                                                                            |
| 14:40~15:05 | 飯間 信 (北大・電子研)<br>Rich Pelz が教えてくれたこと                                                                                            |
| 15:05~15:30 | 大木谷 耕司 (京大・数理研)<br>The final works of Rich Pelz                                                                                 |

流体力学における Rich Pelz の貢献  
Rich Pelz' Contributions to Fluid Dynamics  
短期共同研究報告集

2003年1月24日  
研究代表者 大木谷 耕司 (Koji Ohkitani)

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